

AMENDMENTS TO THE CLAIMS

Please cancel claims 136, 140, 149, 154, 155, 209, 210, 212-214, 216, 219, 220, 223, 224 and 226 without prejudice.

Please amend claims 137, 138, 141-148, 150-153, 203-205, 217, 218, 221 and 225 as shown the following complete list of claims.

1.-136. (Canceled).

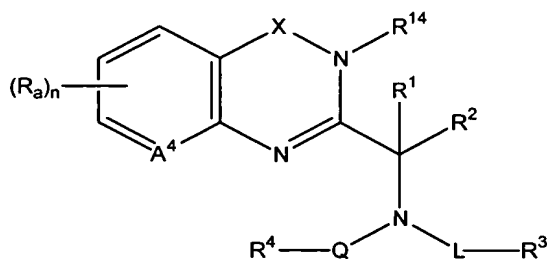
137. (Currently amended) The compound of Claim ~~136~~ 141, wherein X is -C(O)-.

138. (Currently amended) The compound of Claim ~~136~~ 141, wherein R¹⁴ is a substituted or unsubstituted phenyl.

139. (Previously presented) The compound of Claim 137, wherein R¹⁴ is a substituted or unsubstituted phenyl.

140. (Canceled).

141. (Currently amended) ~~The A compound of Claim 136,~~ having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂- ;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R³ is a member selected from the group consisting of hydroxy, (C₁-C₈)alkoxy, amino, (C₁-C₈)alkylamino, di(C₁-C₈)alkylamino, (C₂-C₈)heteroalkyl, (C₃-C₉)heterocyclyl, (C₁-C₈)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR⁹R¹⁰ and -CO₂R¹¹;

R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl;

each R⁹, R¹⁰ and R¹¹ is independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₈)heteroalkyl, aryl(C₁-C₈)alkyl and aryl(C₂-C₈)heteroalkyl;

R¹⁴ is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)₂R', -NR'-C(O)NR''R''', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

142. (Currently amended) The compound of Claim ~~136~~ 141, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

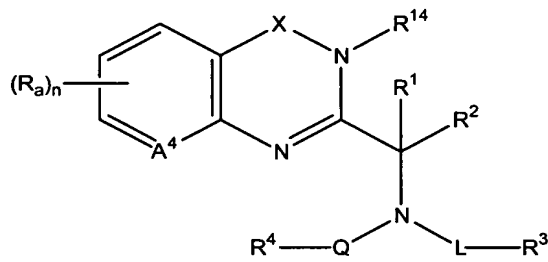
143. (Currently Amended) The compound of Claim ~~136~~ 151, wherein R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

144. (Currently amended) The compound of Claim ~~136~~ 141, wherein ~~R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl,~~ and R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen,

(C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

145. (Currently amended) The compound of Claim ~~136~~ 141, wherein R¹ is selected from the group consisting of methyl, ethyl and propyl, and R² is hydrogen.

146. (Currently amended) ~~The A compound of Claim 136,~~ having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂-;

R¹ and R² are each methyl;

R³ is a member selected from the group consisting of hydroxy, (C₁-C₈)alkoxy, amino, (C₁-C₈)alkylamino, di(C₁-C₈)alkylamino, (C₂-C₈)heteroalkyl, (C₃-C₉)heterocyclyl, (C₁-C₈)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR⁹R¹⁰ and -CO₂R¹¹;

R⁴ is a member selected from the group consisting of (C₁-C₂₀)alkyl, (C₂-C₂₀)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₆)heteroalkyl, aryl(C₁-C₆)alkyl and aryl(C₂-C₆)heteroalkyl;

each R⁹, R¹⁰ and R¹¹ is independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₈)heteroalkyl, aryl(C₁-C₈)alkyl and aryl(C₂-C₈)heteroalkyl;

R¹⁴ is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

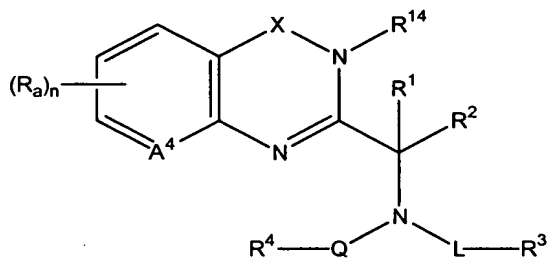
the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)₂R', -NR'-C(O)NR''R''', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy

and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

147. (Currently amended) The compound of Claim ~~136~~ 141, wherein L is (C₁-C₄)alkylene.

148. (Currently amended) ~~The A compound of Claim 136,~~ having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂-;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R³ is a member selected from the group consisting of (C₁-C₈)alkoxy, (C₃-C₉)heterocyclyl and heteroaryl (C₁-C₈)acylamino;

R⁴ is a member selected from the group consisting of (C₁-C₂₀)alkyl, (C₂-C₂₀)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₆)heteroalkyl, aryl(C₁-C₆)alkyl and aryl(C₂-C₆)heteroalkyl;

R¹⁴ is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

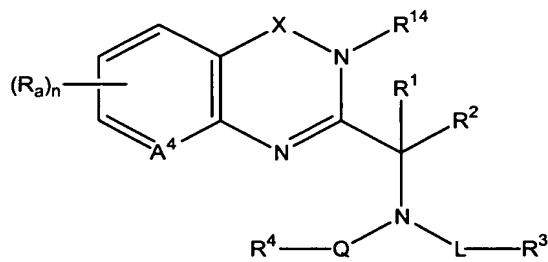
the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)₂R', -NR'-C(O)NR''R''', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

149. (Canceled).

150. (Currently amended) The compound of Claim ~~136~~ 141, wherein R³ is heteroaryl and R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.

151. (Currently amended) ~~The A~~ compound of Claim ~~136~~, having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂-;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl;

R⁴ is a member selected from the group consisting of (C₁-C₂₀)alkyl, (C₂-C₂₀)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₆)heteroalkyl, aryl(C₁-C₆)alkyl and aryl(C₂-C₆)heteroalkyl;

R¹⁴ is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)₂R', -NR'-C(O)NR''R''', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the

group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

152. (Currently amended) The compound of Claim ~~136~~ 141, wherein R¹ and R² are each independently selected from the group consisting of H, methyl and ethyl; R¹⁴ is phenyl; L is methylene, ethylene or propylene; and R³ is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl; ~~and R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl.~~

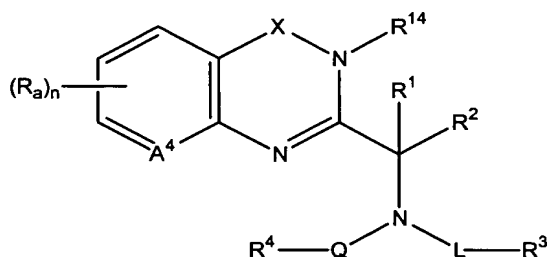
153. (Currently amended) A pharmaceutical composition comprising the compound of Claim ~~136~~ 141, 146, 148 or 151 and a pharmaceutically acceptable carrier or diluent.

154.-202. (Canceled).

203. (Currently amended) A method for the modulation of CXCR3 function in a cell, comprising contacting said cell with a compound of Claim ~~136~~ 141, 146, 148 or 151.

204. (Currently amended) A method for the modulation of CXCR3 function, comprising contacting a CXCR3 protein with a compound of Claim ~~136~~ 141, 146, 148 or 151.

205. (Currently amended) A compound having the formula:



or a pharmaceutically acceptable salt thereof wherein:

A⁴ is N;

X is -C(O)- or -CH₂- ;

R¹ and R² are members independently selected from the group consisting of H and (C₁-C₄)alkyl;

R³ is a member selected from the group consisting of hydroxy, (C₁-C₈)alkoxy, amino, (C₁-C₈)alkylamino, di(C₁-C₈)alkylamino, (C₂-C₈)heteroalkyl, (C₃-C₉)heterocyclyl, (C₁-C₈)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR⁹R¹⁰ and -CO₂R¹¹;

~~R⁴ is a member selected from the group consisting of (C₁-C₂₀)alkyl, (C₂-C₂₀)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₆)heteroalkyl, aryl(C₁-C₆)alkyl and aryl(C₂-C₆)heteroalkyl;~~

R⁴ is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C₁-C₄)alkyl, halo(C₁-C₄)alkoxy, cyano, nitro and phenyl;

each R⁹, R¹⁰ and R¹¹ is independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, heteroaryl, aryl, heteroaryl(C₁-C₆)alkyl, heteroaryl(C₂-C₈)heteroalkyl, aryl(C₁-C₈)alkyl and aryl(C₂-C₈)heteroalkyl;

R¹⁴ is substituted or unsubstituted aryl or heteroaryl;

Q is -C(O)-;

L is (C₁-C₈)alkylene;

the subscript n is an integer from 0 to 4; and

each R_a is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO₂, -CO₂R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)₂R', -NR'-C(O)NR''R''', -NH-C(NH₂)=NH, -NR'C(NH₂)=NH, -NH-C(NH₂)=NR', -S(O)R', -S(O)₂R', -S(O)₂NR'R'', -N₃, -CH(Ph)₂, perfluoro(C₁-C₄)alkoxy and perfluoro(C₁-C₄)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C₁-C₄)alkyl and (unsubstituted aryl)oxy-(C₁-C₄)alkyl.

206. (Previously presented) The compound of Claim 205, wherein X is -C(O)-.

207. (Previously presented) The pharmaceutical composition of Claim 153, wherein X is -C(O)-.

208. (Previously presented) The pharmaceutical composition of Claim 153, wherein R¹⁴ is a substituted or unsubstituted phenyl.

209.-210. (Canceled).

211. (Previously presented) The pharmaceutical composition of Claim 153, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

212.-214. (Canceled).

215. (Previously presented) The pharmaceutical composition of Claim 153, wherein L is (C₁-C₄)alkylene.

216. (Canceled).

217. (Currently amended) The method of Claim ~~154~~ 203, wherein X is -C(O)-.

218. (Currently amended) The method of Claim ~~154~~ 203, wherein R¹⁴ is a substituted or unsubstituted phenyl.

219-220. (Canceled).

221. (Currently amended) The method of Claim ~~154~~ 203, wherein R¹⁴ is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

222. (Previously presented) The method of Claim 221, wherein R¹⁴ is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C₁-C₈)alkoxy, (C₁-C₈)alkyl, (C₂-C₈)heteroalkyl, CONH₂, methylenedioxy and ethylenedioxy.

223.-224. (Canceled).

225. (Currently amended) The method of Claim ~~154~~ 204, wherein L is (C₁-C₄)alkylene.

226. (Canceled).